NETGEAR™

Network Card
Installation Guide

MODEL
FA 311

MODEL
FA 312

NETGEAR™

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Support Information

See Support Information Card for phone numbers.

Internet / World Wide Web

Go to http://www.NETGEAR.com for the NETGEAR Web page. Defective or damaged merchandise can be returned to your point-of-sale representative.

IMPORTANT!

Please register online. YOU MUST REGISTER TO OBTAIN TECHNICAL SUPPORT. PLEASE RETAIN PROOF OF PURCHASE and this warranty information. To register your product, get product support, or to obtain product information and NETGEAR product documentation, direct your Web browser to the **http://www.NETGEAR.com** Web page. If you do not have access to the World Wide Web, you can register your product using the enclosed registration card and mail it to NETGEAR customer service

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January 2001

█ START HERE

Instructions in this guide are for users of Windows® 95 and Windows 98 who are installing the NETGEAR™ Model FA311 Network Card or the Model FA312 Network Card. For instructions on installing and verifying the Windows network driver, refer to "Install the Windows Network Driver" on the other side of this guide.

These three easy steps are provided in this guide for installing your Model FA311 or Model FA312 Network Card:

1. Verify Package Contents
2. Install the Network Card
3. Connect the Network Cables

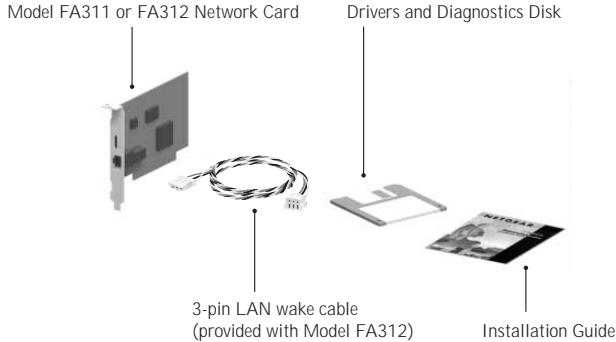As a last step, be sure to register your NETGEAR product.

⊖ **Note:** If you are using other network operating systems, insert the Drivers and Diagnostics Disk in Drive A, type the command A:\HELP, press [Enter] to execute the program, press [Enter] again to pass the opening screen, select the name of the operating system, press [Enter], and then follow the instructions on the screen.

WAKE-ON-LAN Feature

The Model FA312 Network Card features WAKE-ON-LAN, which allows system administrators to remotely access any workstation on a LAN. This feature works exclusively on Microsoft Windows-based networks.

█ 1 VERIFY PACKAGE CONTENTS

Unpack the contents of the package and make sure that you have everything.

Model FA311 or FA312 Network Card   Drivers and Diagnostics Disk

3-pin LAN wake cable
(provided with Model FA312)   Installation Guide

Verify PC Requirements

The instructions given in this guide are for using either the Model FA311 Network Card or the Model FA312 Network Card in a PC.
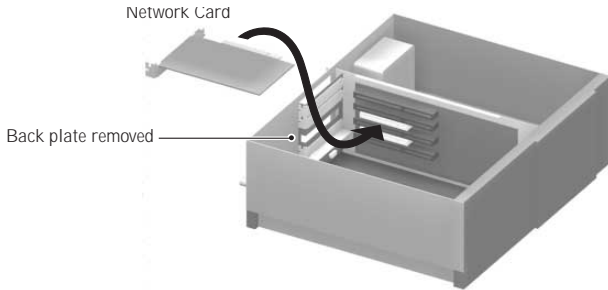
You must have a PC with:

• Windows 95 or Windows 98
• An available PCI expansion slot

█ 2 INSTALL THE NETWORK CARD

⊖ **Note:** Touch a grounded metal object to free yourself of static electricity before you handle the network card.

1. Turn the power off and unplug the power cord from your computer.
2. Remove the PC cover.
3. Choose an available PCI slot (PCI slots are the shorter slots) and remove the corresponding back plate from the PC chassis.
4. Insert the network card into the PCI expansion slot.

⊖ **Note:** To avoid damaging any components on the network card, handle it by the edges, using your thumbs to push it securely into the PCI slot. Make sure the network card is fully inserted into the slot to prevent the PC operating system from freezing at startup.
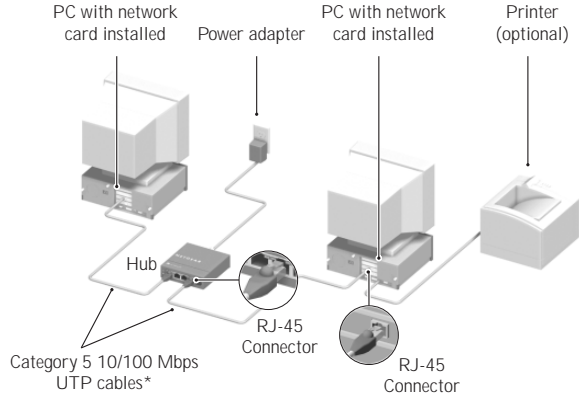
Network Card

Back plate removed

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5. Fasten the network card to the rear of the computer chassis by tightening the screw that is on the PC.
6. Replace the PC cover and reconnect the power cord to the PC.

█ 3 CONNECT THE NETWORK CABLES

Using the appropriate unshielded twisted pair (UTP) cable, connect any port on a network hub to the port on the network card.

⊖ **Note:** One of the ports on NETGEAR hubs is switchable between Normal (MDI-X) and Uplink (MDI) with a Normal/Uplink push button. If you are using this switchable port on a NETGEAR hub to connect to a PC or the network card, make sure the Normal/Uplink push button is set to Normal.

PC with network   PC with network   Printer
card installed Power adapter card installed (optional)

Hub

RJ-45
Connector

Category 5 10/100 Mbps   RJ-45
UTP cables*   Connector

*Use the cables provided or any Category 5 UTP cable.
Maximum length = 100 meters (300 feet)

█ INSTALL THE WINDOWS 98 DRIVERS

This guide provides instructions for installing the Windows 98 network driver. Since all versions of Windows may not respond similarly, your computer screen may display different information, in a different order, than pictured in the following instructions. The procedure works for both the FA311 and the FA312.

⊖ **Note:** You must install the network card before installing the network driver.

You need to have the Windows 98 CD-ROM disc and the Model FA311 or Model FA312 Drivers and Diagnostics floppy disk ready to use in the installation process.

⊖ **Note:** If the "Insert Disk" window opens and a message prompts you to insert your disk at any time during the installation process, insert the Windows CD in Drive D (the CD drive) and click on "OK." Then follow the next step in the instructions.

1. Turn on the power to the computer and start Windows. The new hardware is found.
2. In the first "Add New Hardware Wizard" dialog box that indicates a PCI Ethernet Controller is found, click on "Next."
3. Select "Search for the best driver…" Click on "Next."

Add New Hardware Wizard

What do you want windows to do?

◉ Search for the best driver for your device (Recommended).

○ Display a list of all the drivers in a specific location, so you can select the driver you want.

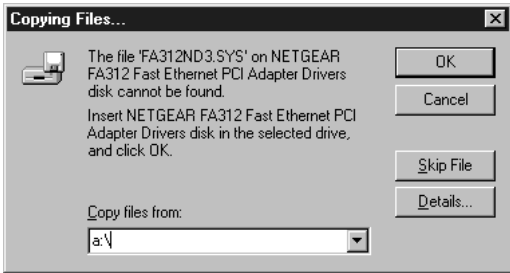[< Back] [Next>] [Cancel]

4. Select "Floppy disk drives" and insert the NETGEAR FA312 Fast Ethernet PCI Adapter Drivers and Diagnostics disk into the floppy drive. Click on "Next."
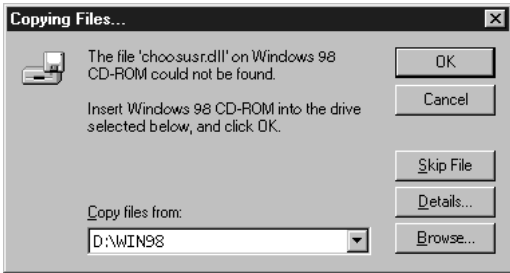

5. Click on "Next" in the Update Device Driver Wizard.

6. When the "Network" window opens, enter a name (a different one-word name for each computer) in the "Computer name" entry field; enter a workgroup name (the name of your entire network) in the "Workgroup" entry field. Click on "OK."

7. When asked to insert the NETGEAR FA312 Fast Ethernet PCI Adapter Drivers disk, click on "OK."

8. Type A:\ in the "Copy files from" entry field and click on "OK." The system copies the files from the driver diskette.

9. Make sure the Windows 98 CD-ROM disk is in the system, and click on "OK" when prompted.

10. Make sure the designated path to the Windows 98 CD-ROM is displayed in the "copy files from" prompt line (for example, D:\WIN98).
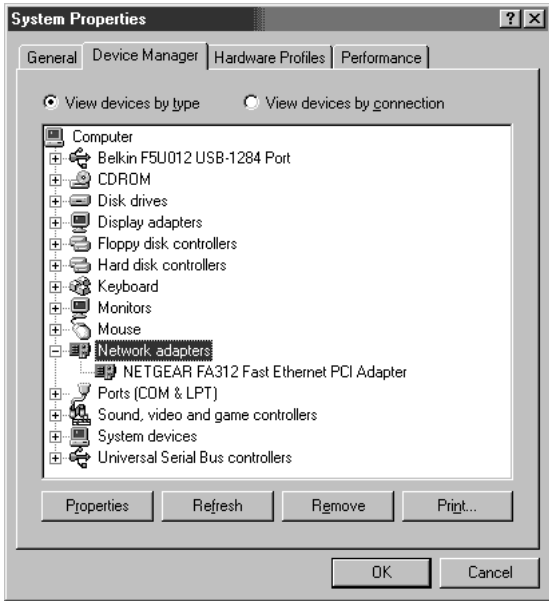

11. In the "Update Device Driver Wizard" dialog box, click on "Finish."

12. Remove the NETGEAR FA312 Drivers and Diagnostics disk and the Windows 98 CD-ROM. When asked if you want to restart your computer, click on "Yes."

You must restart your computer to complete the installation of the driver.

VERIFY INSTALLATION

1. Double-click on "My Computer" on the desktop.

2. Double-click on "Control Panel."

3. Double-click on "System."

4. Click on "Device Manager."

5. Double-click on "Network adapters."

6. If there is a problem with the installation of the driver, an exclamation point appears next to "NETGEAR FA312 Fast Ethernet PCI Adapter." If there is an exclamation point, double-click on "NETGEAR FA312 Fast Ethernet PCI Adapter." The "Properties" window opens, and a message regarding the status of the device is displayed in the window. Continue to click on "OK" or click on the "X" in the right-hand corner to close any open windows and return to the Windows desktop.

TECHNICAL SPECIFICATIONS

Model FA311 or Model FA312 Network Card

Standards Compatibility

NetWare tested and approved Microsoft Windows 95, Windows 98, Windows NT® compatible
IEEE 802.3u 100BASE-TX Fast Ethernet
IEEE 802.3i 10BASE-T Ethernet
Auto-sensing PCI Plug and Play 2.1 or 2.2 compatible

Network Interface

RJ-45 connector for 10BASE-T or 100BASE-TX

Power

Power consumption: 3 W max.
DC operating voltage: +5 +/- 5% @ 630 mA maximum

Physical Specifications

Dimensions: 5.7 by 3.7 in. (14.4 by 9.3 cm)
Weight: 0.20 lb. (90 g)

Environmental Specifications

Operating temperature: 0 to 40ºC
Operating humidity: 10 to 90% non-condensing

Warranty Information

Limited lifetime

Trademarks

NETGEAR is a trademark of NETGEAR, Inc. Microsoft, Windows, and Windows NT are registered trademarks of Microsoft Corporation. All other trademarks and registered trademarks are the property of their respective owners.

Statement of Conditions

In the interest of improving internal design, operational function, and/or reliability, NETGEAR reserves the right to make changes to the products described in this document without notice. NETGEAR does not assume any liability that may occur due to the use or application of the product(s) or circuit layout(s) described herein.

Certificate of the Manufacturer/Importer

It is hereby certified that the Model FA311 Network Card and Model FA312 Network Card have been suppressed in accordance with the conditions set out in the BMPT-AmtsblVfg 243/1991 and Vfg 46/1992. The operation of some equipment (for example, test transmitters) in accordance with the regulations may, however, be subject to certain restrictions. Please refer to the notes in the operating instructions.
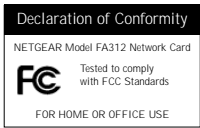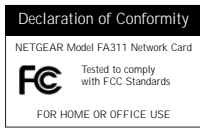
Federal Office for Telecommunications Approvals has been notified of the placing of this equipment on the market and has been granted the right to test the series for compliance with the regulations.

Federal Communications Commission (FCC) Compliance Notice: Radio Frequency Notice

⇨ **Note:** Modifications to this device change it from the original state it was in when tested and may alter the device so that it no longer complies with FCC testing limitations for Class B digital devices. According to FCC regulations, the user could be prohibited from operating this equipment if it is modified.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

⇨ **Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

EN 55 022 Statement

This is to certify that the Model FA311 Network Card and Model FA312 Network Card are shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC, Article 4a. Conformity is declared by the application of EN 55 022 Class B (CISPR 22). Compliance is dependent upon the use of shielded data cables.

Canadian Department of Communications Radio Interference Regulations

This digital apparatus (Model FA311 Network Card and Model FA312 Network Card) do not exceed the Class B limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Règlement sur le brouillage radioélectrique du ministère des Communications

Cet appareil numérique (Model FA311 Network Card et Model FA312 Network Card) respecte les limites de bruits radioélectriques visant les appareils numériques de classe B prescrites dans le Règlement sur le brouillage radioélectrique du ministère des Communications du Canada.

Hardware Warranty Information

Subject to the provisions described below, this NETGEAR product is protected by a limited lifetime warranty from defects in material and workmanship.

Should a product fail to perform as described above within the first year following the original date of purchase, NETGEAR will ship a replacement for the failed product upon return of the defective product.

Products that fail after the first year following the original date of purchase will be repaired or replaced with the same or functionally equivalent, product by NETGEAR, at its discretion, free of charge provided you (1) have, within 30 days of the original date of purchase, completed and returned the Owner Registration Cards which accompanied the products when shipped, (2) return the failed product to NETGEAR designated repair facility with shipping charge prepaid, and (3) provide NETGEAR with proof of the original date of purchase. Repaired or replacement products will be returned to you with shipping charges prepaid.

Replacement products may be refurbished or contain refurbished materials. If NETGEAR, by its sole determination, is unable to repair or replace the defective product, it will refund the depreciated purchase price of the product.

This warranty does not apply if, in the judgement of NETGEAR, the product fails due to damage from shipment, handling, storage, accident, abuse or misuse, or if it has been used or maintained in a manner not conforming to product manual instructions, has been modified in any way, or has had any serial number removed or defaced. Repair by anyone other than NETGEAR or an approved agent will void this warranty. The maximum liability of NETGEAR under this warranty is limited to the purchase price of the product covered by the warranty.

Prior to returning any defective product, the end customer or the reseller from whom the end customer originally purchased the product must obtain a Return Materials Authorization (RMA) number from NETGEAR. All defective products should be returned to NETGEAR with shipping charges prepaid. NETGEAR will not accept collect shipments.

EXCEPT AS SPECIFICALLY PROVIDED IN THIS AGREEMENT OR AS REQUIRED BY LAW, THE WARRANTIES AND REMEDIES STATED ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS, ORAL OR WRITTEN, EXPRESS OR IMPLIED. ANY AND ALL OTHER WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PART RIGHTS ARE EXPRESSLY EXCLUDED. NETGEAR SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO ANY PERSON FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, DAMAGES RESULTING FROM USE OR MALFUNCTION OF THE PRODUCTS, LOSS OF PROFITS OR REVENUES OR COSTS OF REPLACEMENT GOODS. EVEN IF NETGEAR IS INFORMED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES.